force transmitting cooperation with a gas exchange valve 5, an armature 1 secured with the valve stem 4 perpendicularly to the valve stem longitudinal axis, an electromagnet 3 acting as a closing magnet, as well as a further electromagnet 2 acting as an opening magnet, which is arranged spaced apart from the closing magnet 3 in the direction of the valve stem longitudinal axis. The electromagnets 2, 3 respectively comprise an energizing or exciting coil 20 or 30, and pole surfaces lying across from one another. By means of an alternating energization of both electromagnets 2, 3, that is to say the exciting coils 20 or 30, the armature 1 is moved back and forth between the electromagnets 2, 3 along a stroke travel that is limited by the electromagnets 2, 3. A spring arrangement with a first spring 61 acting in the opening direction onto the armature 1 and a second spring 62 acting in the closing direction onto the armature 1 effectuates that the armature 1 is held in a neutral equilibrium position between the electromagnets 2, 3 in the de-energized condition of the exciting coils 20, 30. Furthermore, adjusting or setting means 71, 72 for setting the pre-stressing of the springs 61, 62 are provided. The setting means 71, 72 may, for example, be embodied as disks, which effectuate a compression of the springs 61, 62, and thereby prescribe the pre-stressing of the respective springs 61, 62. They may, however, also be controllably embodied, and enable a stepless variation of the pre-stressing.

Please delete and replace the paragraph at **pag 6, line 14 to page 7, line 23**, to read as follows:

The stroke travel distance Im of the armature 1, over which the armature 1 travels - the motion of the armature 1 is referred to as flight in the following - is limited due to the prescribed spacing distance between the electromagnets 2, 3. The progressions of the spring forces of the two springs 61, 62, that is to say the forces with which the springs 61, 62 act on the armature 1, are dependent on the armature position I and can be described in connection with spring characteristic curves. In the force versus travel distance diagram of Fig. 2, the spring characteristic curve of the first spring 61 is referenced with F1, and the spring characteristic curve of the second spring 62 is referenced with F2. During the flight of the armature 1 from the upper end position to the lower end position, that is to say from the armature position 0 to the armature position Im, the force of the first spring 61 increases at first from a holding value F11 to a maximum value F13, which is achieved at the armature position Ix, in order to thereafter fall off to an end value F10 lying below the holding value F11, whereby the end value F10 is achieved at the armature position Im, that is to say in connection with the armature 1 lying against the opening magnet 2. In contrast, the spring force of the second spring 62 increases from an end value F20, which is effective in the in the upper end position of the armature 1, monotonously

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but non-linearly to a holding value F21, which is achieved in the lower end position of the armature 1. The end values F10, F20 give the pre-stressing of the respective spring 61 or 62; they are adjusted or set in such a manner so that the area A1 under the spring characteristic curve F1 is equal to the area A2 under the spring characteristic curve F2. The areas A1 and A2 in that context correspond to the energy that is stored in the respective spring 61, 62, if these are compressed due to the motion of the armature. The two spring characteristic curves F1, F2 intersect each other at a point that prescribes the energetic center position Ie of the armature 1; this energetic center position Ie, which the armature 1 takes up with de-energized electromagnets 2, 3, generally does not correspond with the geometric center position between the electromagnets 2, 3 in connection with springs with different spring characteristic curves.

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Please delete and replace the paragraph at **page 9, lines 8 to 20**, to read as follows:

The energy that is stored in the first spring 61 if the armature 1 is moved from its lower end position to its upper end position, is also measured in the same manner as described above, namely by measuring the progression of the spring force of the first spring 61 that results from the armature motion, and by integration of this progression over the spring travel distance, through which the first

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